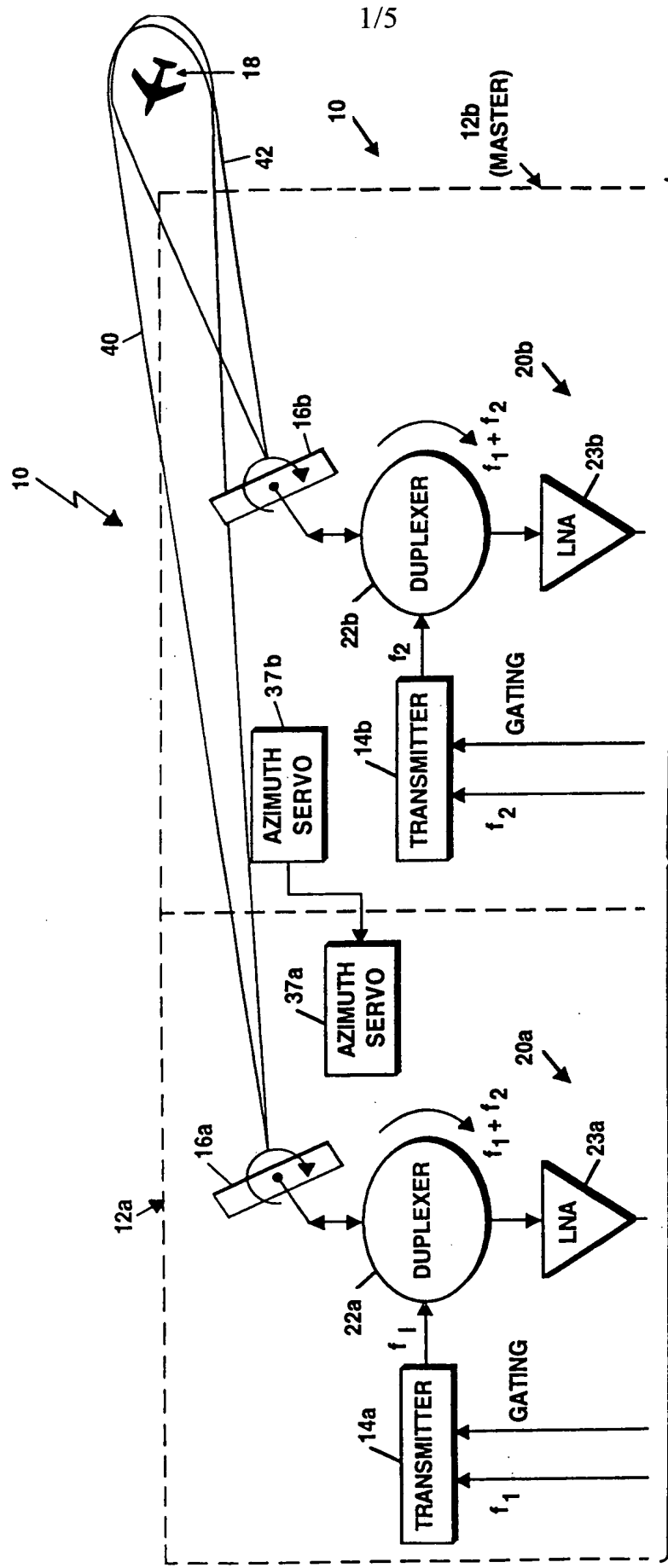


OIPE
 APR 21 2005
 PATENT & TRADEMARK OFFICE



TO FIG. 1B

FIG. 1A

2/5

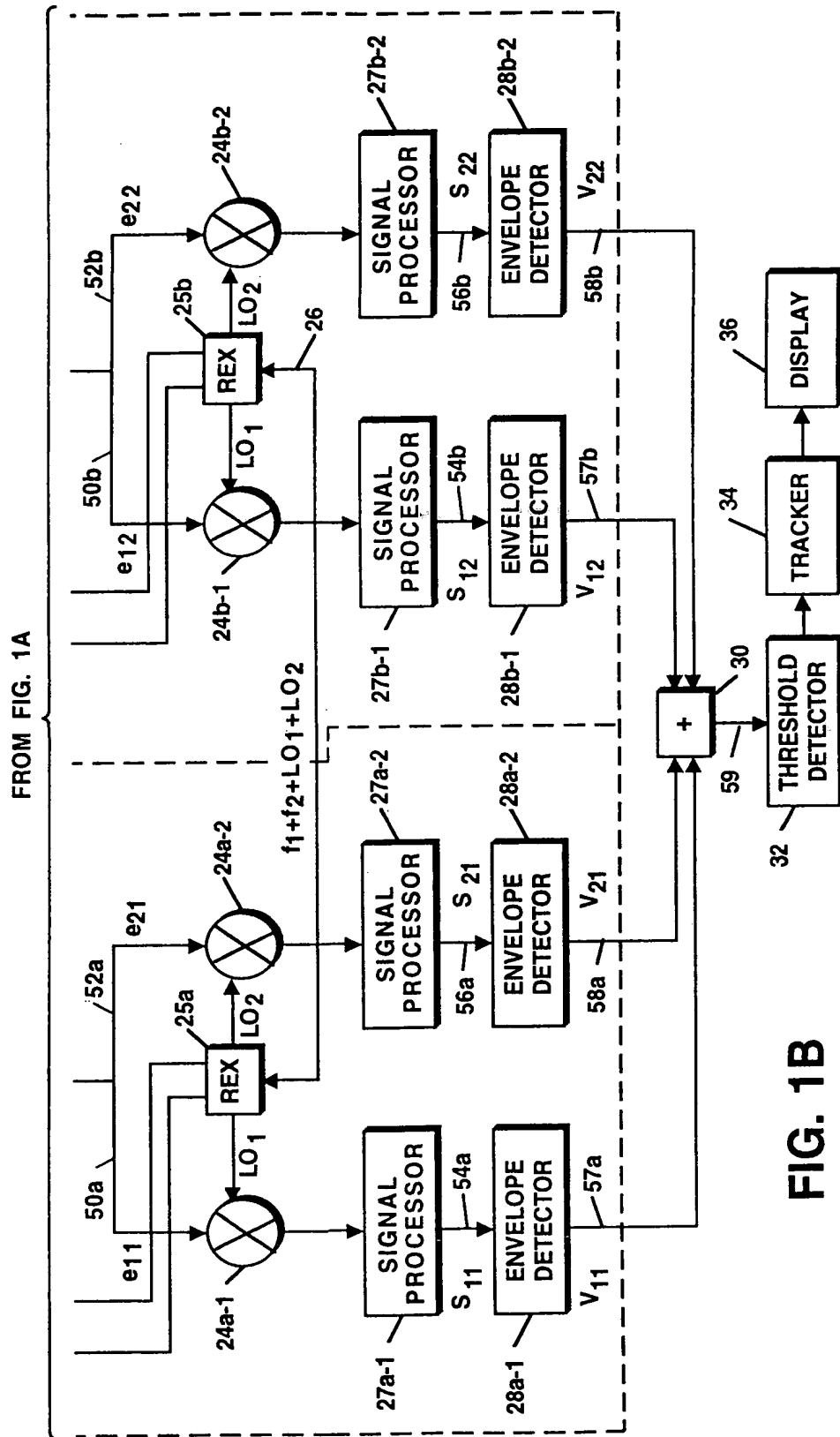


FIG. 1B

3/5

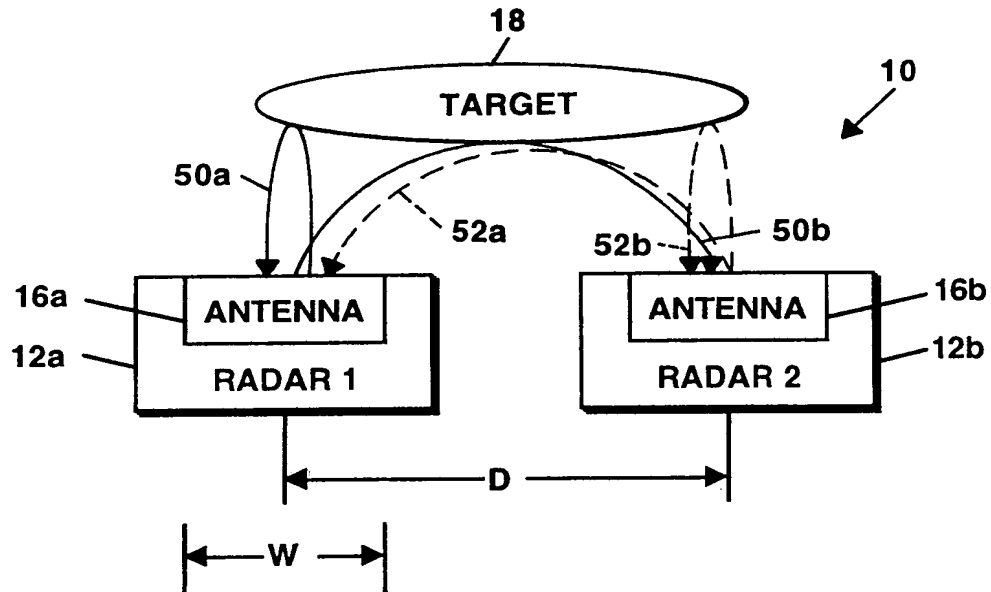


FIG. 2

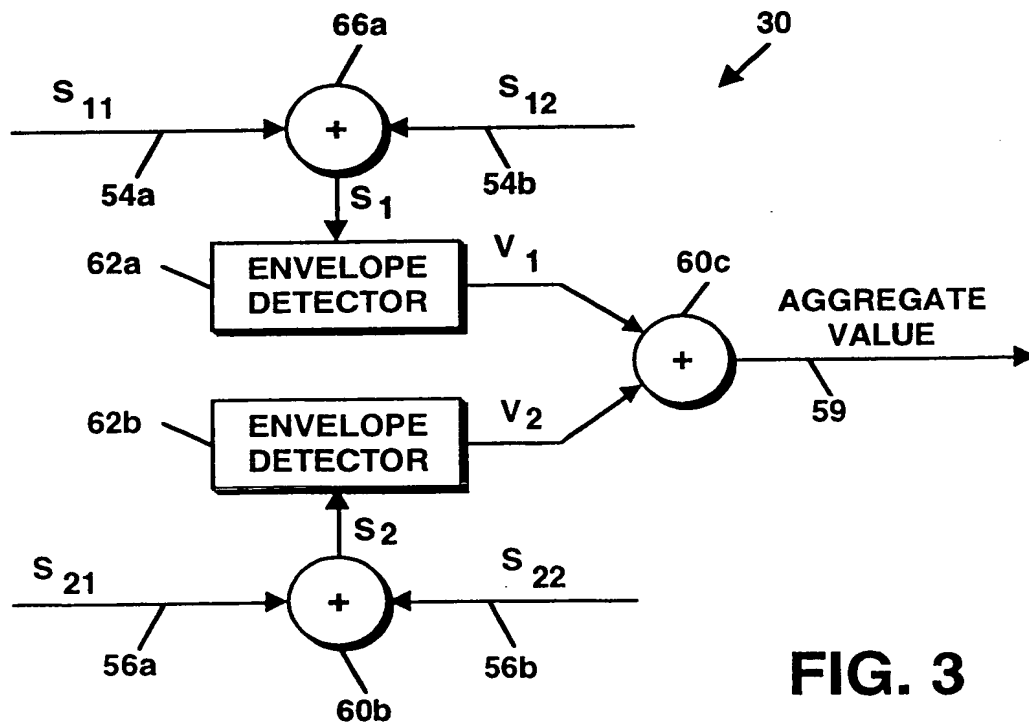


FIG. 3

4/5

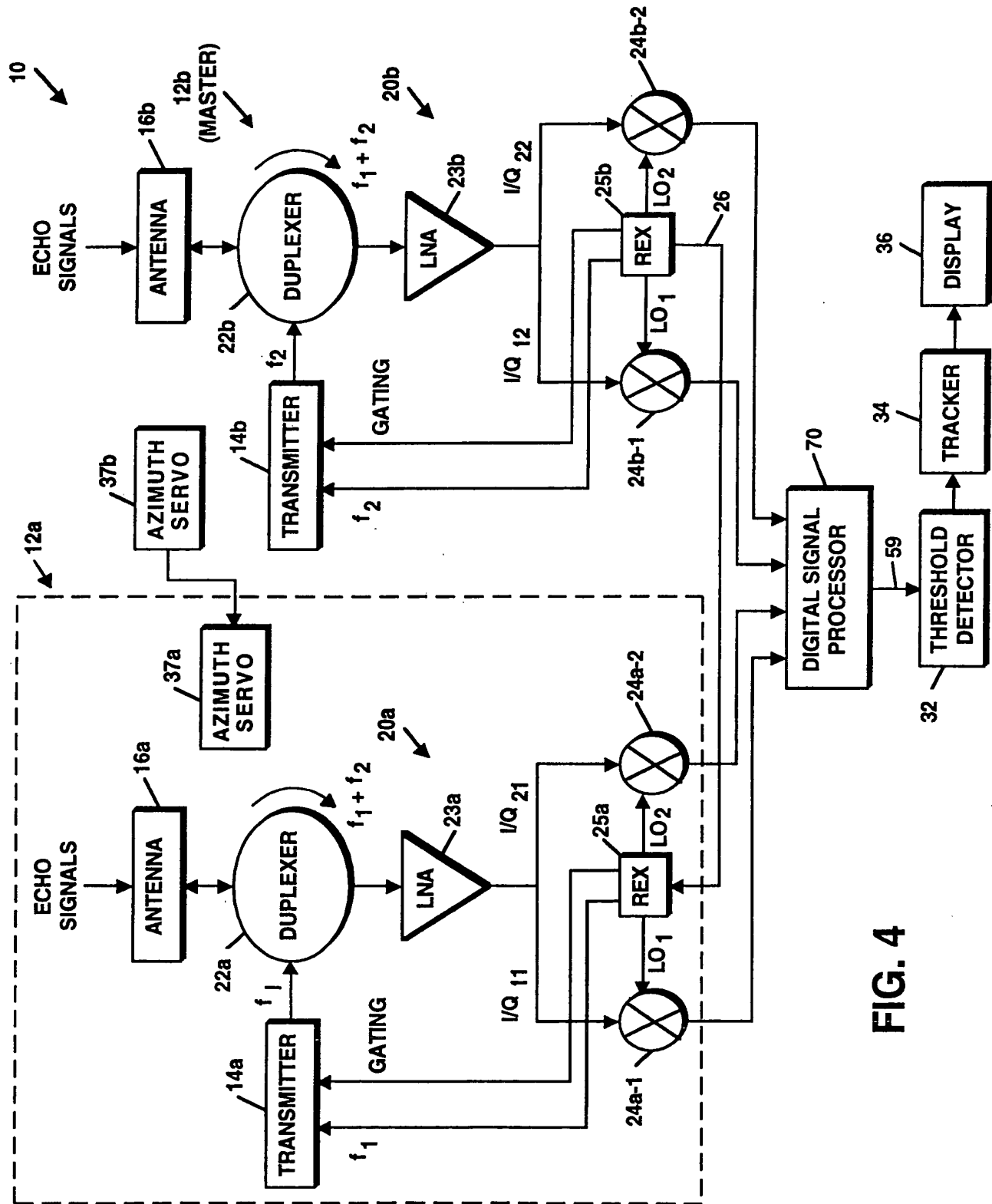


FIG. 4

Mode	Carrier Frequencies for Radar 1 (f_1) and Radar 2 (f_2)	Coherent or Incoherent on Transmit	Receiver Processing of S_{11} , S_{12} and S_{21} , S_{22}	How Waveforms Transmitted	Type of Target	SNR Sensitivity Improvement (dB)
Search/Track	$f_1 \neq f_2$	Incoherent	Incoherent (as shown in FIG. 1)	Simultaneously	Non-fluctuating	~ 6
Search/Track	$f_1 \neq f_2$	Incoherent	Coherent + Incoherent (as shown in FIG. 3)	Simultaneously	Non-fluctuating	~ 6
Track	$f_1 = f_2$	Coherent	Coherent	Simultaneously	Non-fluctuating	~ 9
Track	$f_1 = f_2$	Coherent	Coherent + Incoherent	Simultaneously	Non-fluctuating	~ 9
Search/Track	$f_1 = f_2$	Incoherent	Incoherent	Sequentially	Non-fluctuating	~ 6
Search/Track	$f_1 = f_2$	Incoherent	Coherent + Incoherent	Sequentially	Non-fluctuating	~ 6
Search/Track	$f_1 \neq f_2$	Incoherent	Incoherent	Simultaneously	Swierling-II	8.7

FIG. 5